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TWO-COMPONENT (EPOXY/AMINE) STRUCTURAL FOAM-IN-PLACE MATERIAL

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ABSTRACT

The present invention relates to methods, materials, and products for forming a foamed product, comprising the steps of combining an epoxy-based component with an amine-based component. The epoxy component is cross-linked through a polymerization reaction catalyzed by the amine formulation. In this regard, a reactive mixture or exothermic reaction is created between the epoxy component and the amine component when combined. The heat generated by the exothermic reaction softens a thermoplastic shell of a blowing agent formulated within the epoxy component thereby enabling a solvent core within the thermoplastic shell of the blowing agent to expand from the heat generated by the exothermic reaction.